

REMARKS

Claims 1-64 are pending. Claims 1-22 are presented for prosecution. Claims 23-64 were previously withdrawn from consideration. No claim is amended. No claim is cancelled.

Claims 1-22 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent. No. 6,734,029 to Furusawa. Specifically, the Office Action states that Furusawa, "in col 8, lines 1-27, in col 10, lines 16-67, shows that the pattern material supply process ... can be performed plural times". Applicants respectfully disagree, and point out that col 8, lines 1-27 describes a heating process only, and does not teach or suggest repeated applications of the material supply process that supplies the conductive trace material. Also, col 10, lines 16-67 recite two specific examples of Furusawa's process, a first which applies gold for form traces and a second that applies silver. In both examples, however, the material (gold or silver) is applied only once to construct the signal traces. Thus, applicants are at a loss to determine how Furusawa supposedly teaching repeated applications of a material supplying process to build up traces.

The Office Action also states that, "Furusawa, in col 8, lines 1-27, in col 10 lines 1-37, discloses that the lyophobic region (mask) is removed after the annealing of the fine particle dispersion, and before the coating of the second self organizing film (mask removal and annealing is performed simultaneously)". Applicants respectfully disagree. Firstly, the cited excerpts describe the construction of the mask. As is known in the art, a mask is a material layer to be formed into a template having openings in a predetermined pattern. Prior to its patterns being made, the material layer is not a mask. That is, the cited excerpts describe a process by which openings (i.e. specified parts of Furusawa's barrier 12 (Furusawa Fig. 1) are removed to create a mask having openings (11a, Furusawa Fig. 3). In other words, Furusawa is describing his process for making a mask (i.e. opening sections 11a and covering sections 11b in a barrier material 12). Furusawa does not teach or suggest removing his mask, as is clearly shown in his Fig. 6, which shows his finished structure with a signal path 16 constructed in the opening sections of this fixed mask. It is to be understood that Furusawa depends on his mask to provide support to his wiring pattern 16.

As to the question of Furusawa supposedly teaching "mask removal and annealing is performed simultaneously", the Office Action itself states that "the lyophobic region (mask) is removed after the annealing of the fine particle dispersion", which is clearly a *sequential* process, not a *simultaneous* process. Nonetheless, as Applicants have already explained immediately above, that the removal of the lyophobic regions is part of Furusawa's mask creation process, and not part of Furusawa's process for supplying wiring forming particles to his mask.

Having explained that Furusawa does not teach or suggest removing his mask (i.e. only shows how to construct his mask by making pattern-forming openings), applicants further point out that claim 18 requires that the mask removing step and annealing step be performed simultaneously.

Also, Applicants respectfully point out that claims 5, 7 - 9, 15, 21, and 22 require that liquid pattern material be removed from the mask surface. The Office Action alludes to Furusawa using the word "clean" to suggest that this includes removing pattern material from the mask surface. However, Furusawa is clear in stating that his mask repels his pattern forming material, and thus no material would be adhered to it. The only mention of cleaning made by Furusawa is in reference to preparing his substrate prior to forming the mask. It is clear that since the cleaning step takes place before his mask is formed, it cannot possibly be construed to include cleaning the mask itself.

This is because the present application describes several methods of implementing the present invention, not all of which require hydrophobic and hydrophilic materials. For example, paragraph 151 explains that the conductive liquid is mystified and given a first electric charge. A DC power source then adds a second electric charge opposite the first electric charge in order to attract and hold the liquid to the substrate. Also, paragraph 152 explains that the present invention may not require that the mask repel liquid. An air knife may be used to remove liquid from the mask.

Also, a reason why the present invention can remove the mask, while Furusawa requires retaining his mask for support (his Fig. 6), is explained at



least in paragraphs 141-143. These paragraphs explain that one of the embodiments of the present invention requires that the step that makes the mask hydrophobic can also react with the substrate surface (i.e. workpiece surface) to erode the exposed substrate surface. The wiring patterns are formed in the eroded exposed areas, which provide an anchoring mechanism for the wiring pattern.

Lastly, Applicants respectfully point out that the foreign priority date of the present Invention (Dec. 22, 2000), predates the U.S. priority date (June 29, 2001) of the Furusawa reference, and thus Applicants assert that U.S. Patent No. 6,734,029 is not a valid prior art reference.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration of the present application.

Respectfully submitted,

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